UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/594,031	09/25/2006	Kenji Shiga	12477/13	4637

23838 7590 07/28/2010

KENYON & KENYON LLP
1500 K STREET N.W.
SUITE 700
WASHINGTON, DC 20005

EXAMINER
JONES JR., ROBERT STOCKTON

ART UNIT	PAPER NUMBER
1796	

MAIL DATE	DELIVERY MODE
07/28/2010	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/594,031	SHIGA ET AL.	
	Examiner	Art Unit	
	ROBERT JONES JR.	1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 May 2010*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *7-38* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *7-38* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *5/18/10*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102/103

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

2. Claim 38 is rejected under 35 U.S.C. 102(b) as being anticipated by or, in the alternative, under 35 U.S.C. 103(a) as being obvious over Akira (JP 2003-238777; cited in previous Office Action).

3. Akira teaches a polyester composition comprising a polyester resin and a reactive compound. The polyester resin is amorphous (p. 3, Claim 4), and comprises an aromatic dicarboxylic acid having 8-14 carbons and aliphatic or alicyclic glycols having 2-10 carbons (p. 3, Claim 5). Akira's reactive compound contains a glycidyl group and/or two or more isocyanate groups per molecule (p. 3, Claim 2). An example of Akira's reactive compound is described as a styrene/methyl methacrylate/glycidyl methacrylate copolymer (p. 10, para. [0036], lines 1-5). Said reactive compound preferably has a molecular weight of 200 to 500,000 (p. 9, [0033]). The composition is prepared by kneading the amorphous polyester and reactive compound, followed by extrusion. See, for instance, Example 1 (p. 14, [0060]), in which 100 parts of polyester and 10 parts of a reactive compound are kneaded in an extruder at a barrel temperature of 180^{o}C. This procedure is substantially similar to the instant Example 1, and will thus inherently result in reacting a portion of the glycidyl groups of the reactive compound

with the amorphous polyester. Alternatively, one of ordinary skill in the art would reasonably expect that some portion of the glycidyl groups in the reactive compound will react with the amorphous polyester when carrying out a procedure similar to that set forth in Akira's Example 1.

4. Akira's composition is not explicitly taught as being a modifier. However, said composition is identical to the claimed modifier, and thus is capable of serving as a modifier. Additionally, the limitation "used in the process according to any one of claims 25 to 36" is a statement of intended use. Said limitation does not require steps to be performed or limit the claims to a particular structure. Therefore, the limitation "used in the process according to any one of claims 25 to 36" does not limit the scope of the instantly claimed modifier, and need not be taught by the prior art in order to anticipate the claims.

Claim Rejections - 35 USC § 103

5. Claims 17-21 and 23-29 are rejected under 35 U.S.C. 103(a) as being obvious over Shiga et al. (US PG Pub. No. 2004/0010073; US Patent No. 7,084,214, cited in previous Office Action, is referred to herein as an equivalent document).

6. Regarding Claims 17 and 21, Shiga teaches a polyester resin composition comprising an amorphous polyester, at least one component selected from the group consisting of a crystalline polyester and a nucleating agent, and optionally a reactive compound (col. 3, lines 29-35). Preferably, the reactive compound has at least two

functional groups per molecule (col. 8, lines 4-6). Preferred functional groups of the reactive compound are isocyanate groups and glycidyl groups (col. 8, lines 23-24). The weight average molecular weight of the reactive compound is preferably from 200 to 500,000 (col. 8, lines 36-41). The reactive compound and polyester form a partially crosslinked product when the reactive compound reacts with the hydroxyl group and carboxyl group of the polyester to form a reaction product in the melt extrusion process (col. 8, lines 7-12). This is indicative that some portion of the glycidyl and/or isocyanate groups of the reactive compound are reacted with the amorphous polyester.

7. It would have been obvious to one of ordinary skill in the art to select a reactive compound containing glycidyl and/or isocyanate groups, as these represent preferred embodiments. It would have been further obvious based on Shiga's commentary on column 8, lines 7-12 that a portion of the functional groups present in the reactive compound are reacted with the amorphous polyester.

8. Regarding Claims 18-20, the amorphous polyester preferably comprises an aromatic carboxylic acid having 8 to 14 carbon atoms and an aliphatic or cycloaliphatic glycol having 2 to 10 carbon atoms as main components (col. 4, lines 10-14). "Main component" is defined such that an amount of an aromatic carboxylic acid having 8 to 14 carbons or an aliphatic or cycloaliphatic glycol having 2 to 10 carbon atoms is at least 50% by mole (col. 4, lines 14-17). Preferably, the aromatic carboxylic acid is terephthalic acid, isophthalic acid, or their mixture (col. 4, lines 27-28). The glycol component is preferably at least one of ethylene glycol, diethylene glycol, neopentyl glycol, cyclohexanedimethanol, 1,3-propanediol and 2-methyl-1,3-propanediol.

9. Regarding Claim 21, specific examples of the reactive compound include styrene/methyl methacrylate/glycidyl methacrylate copolymers (col. 8, lines 31-32). One example of the reactive compound consists of 36.4 parts styrene, 37.3 parts glycidyl methacrylate, and 26.3 parts methyl methacrylate (col. 17, lines 57-59).

10. Regarding Claims 23 and 35, the crystalline polyester preferably comprises at least 50% by mole of at least one alcohol selected from a group which includes ethylene glycol. The crystalline polyester also comprises a polybasic carboxylic acid such as terephthalic acid (col. 6, lines 7-12). One of ordinary skill in the art would at once envisage the use of PET as the crystalline polyester based on this disclosure.

11. Regarding Claims 24 and 36, the claims require "reproduced" PET. The requirement "reproduced" (i.e. recycled) is a product-by-process limitation. Although Shiga does not disclose reproduced or recycled PET, it is noted that "[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process", *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985) . Further, "although produced by a different process, the burden shifts to applicant to come forward with evidence establishing an unobvious difference between the claimed product and the prior art product", *In re Marosi*, 710 F.2d 798, 802, 218 USPQ 289, 292 (Fed. Cir.1983). See MPEP 2113. Therefore, absent evidence of criticality regarding the presently claimed process and

given that PET meets the requirements of the claimed composition, Shiga clearly meet the requirements of present claims 24 and 36.

12. Regarding Claims 25 and 37, Shiga's Example 14 illustrates a process which involves mixing an amorphous polyester (A), a crystalline polyester (a), and a reactive compound (R). The mixture is then kneaded and profile extrusion molded to form a molded article (col. 18, lines 29-41). Profile extrusion molding reads on the claimed melt molding. This process is similar to the process illustrated by Example 1 of the instant specification. Thus, although not explicitly taught by Shiga, a portion of reactive compound (R) will react with amorphous polyester (A), thereby satisfying all requirements of Claim 25. The resultant molded article reads on Claim 37.

13. Regarding Claims 26-28, amorphous polyester (A) is composed of 50% terephthalic acid, 40% ethylene glycol, and 10% neopentyl glycol (col. 15, Table 1, entry A).

14. Regarding Claim 29, reactive compound (R) consists of 36.4 parts styrene, 37.3 parts glycidyl methacrylate, and 26.3 parts methyl methacrylate (col. 17, lines 57-59).

15. Claims 7-11, 13-15, 25-29, and 31-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Avramova et al. (US Pat. No. 4,915,885; cited in previous Office Action) in view of Akira.

16. Regarding Claims 7 and 25, Avramova teaches a homogenous amorphous polymeric blend of poly(ethylene terephthalate) (PET) and poly(butylene terephthalate) (PBT) (Abstract), said blend comprising a mixture of both polymers in the amorphous

state (col. 2, lines 60-67). The PET-PBT blend exhibits a higher tensile strength and elasticity modulus with respect to pure commercial PET and PBT separately, and preserves its amorphous state at room temperature.

17. Avramova further teaches a process of preparing a homogenous amorphous polymeric blend of poly(ethylene terephthalate) (PET) and poly(butylene terephthalate) (PBT) (Abstract, lines 1-3), said blend comprising a mixture of both polymers in the amorphous state (col. 2, lines 60-67). The PET-PBT blend exhibits a higher tensile strength and elasticity modulus with respect to pure commercial PET and PBT separately, and preserves its amorphous state at room temperature. Avramova's process consists of mixing the PET and PBT, melting the mixture, and cooling the mixture (col. 2-3, Claim 1), and may further comprise forming the polymeric blend into a shaped object during the cooling step (col. 3, Claim 3), comparable to melt molding.

18. Avramova does not teach a reactive compound containing two or more glycidyl groups and/or isocyanate groups per one molecule and having a weight average molecular weight of not less than 200 and not more than 500 thousand, and further does not teach said reactive compound comprising 20-99% by weight of vinyl aromatic monomer, 1-80% by weight of hydroxyalkyl (meth) acrylate, and 0-79% by weight of alkyl (meth) acrylate.

19. In the same field of endeavor, Akira teaches a polyester composition comprising a polyester resin and a reactive compound. The polyester resin is amorphous (p. 3, Claim 4), and comprises an aromatic dicarboxylic acid having 8-14 carbons and aliphatic or alicyclic glycols having 2-10 carbons (p. 3, Claim 5). Akira's reactive

compound contains a glycidyl group and/or two or more isocyanate groups per molecule (p. 3, Claim 2). An example of Akira's reactive compound is described as a styrene/methyl methacrylate/glycidyl methacrylate copolymer (p. 10, para. [0036], lines 1-5). Said reactive compound improves melt strength during extrusion (p. 9, para. [0034], lines 4-7).

20. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Avramova's blend of amorphous PET and PBT, as well as the process of forming said blend, to include Akira's reactive compound for the benefit of improving melt strength during extrusion. One of ordinary skill in the art will recognize that some portion of glycidyl groups in Akira's reactive compound will necessarily react with one or both of Avramova's amorphous polyesters. Thus, modification of Avramova in view of Akira satisfies Claims 7 and 25.

21. Regarding Claims 7-10 and 26-28, PET is an amorphous polyester composed of terephthalic acid and ethylene glycol.

22. Regarding Claims 11 and 29, Akira's reactive compound is further described as comprising 36.4 % styrene by weight, 37.3% glycidyl methacrylate, and 26.3% methyl methacrylate (p. 13, para. [0057], lines 3-4).

23. Regarding Claims 13-14 and 31-32, PBT is an amorphous polyester composed of terephthalic acid and 1,4-butanediol.

24. Regarding Claims 15 and 33, PBT is composed of terephthalic acid and 1,4-butanediol. Avramova does not teach the diol component required by Claims 15 and 33. However, 1,4-butanediol and 1,3-propanediol are homologs - compounds differing

regularly by the successive addition of the same chemical groups, in the present instance, a single methylene group. The courts have held, as found in *In re Wilder*, 563 F.2d 457, 195 USPQ 426 (CCPA 1977), that compounds which are homologs "are generally of sufficiently close structural similarity that there is a presumed expectation that such compounds possess similar properties". In light of the case law, it therefore would have been obvious to one of ordinary skill in the art that the 1,3-propanediol disclosed in the present claims is but an obvious variant of the 1,4-butanediol disclosed in Avramova, and thereby one of ordinary skill in the art would have arrived at the claimed invention.

25. Claims 12, 16, 30, and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Avramova in view of Akira as applied to claims 7 and 25 above, further in view of Borman (US Pat. No. 3,953,404; cited in previous Office Action).

26. Regarding Claims 12, 16, 30, and 34, Avramova in view of Akira remains as applied above. Avramova and Akira do not teach that either of the amorphous polyester resins (I) or (III) contain a polyfunctional compound unit having three or more carboxyl groups and/or hydroxyl groups as a monomer component at 0.001 to 5 mole% of an acid component and/or a glycol component, respectively.

27. Borman teaches a branched polyester which contains a branching component having at least three ester-forming groups, said branching component being included from 0.01 to 3 mole percent based on the terephthalate units (col. 2, lines 50-55). Examples of suitable branching components are tri- or tetracarboxylic acids, triols, and

tetrols (col. 3, lines 32-36). Branching in the polyester results in increased molecular weight (col. 2, lines 39-42) and higher melt strength (col. 3, lines 40-43).

28. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Avramova in view of Akira to further include Borman's branching component in either of the amorphous polyester resins (I) and/or (III) for the benefit of increased molecular weight and higher melt strength. Including 0.01 to 3 mole percent of said branching agent in either PET or PBT reads on Claims 12, 16, 30, and 34.

29. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shiga as applied to claim 17 above, and further in view of Borman.

30. Regarding Claim 22, Shiga remains as applied above. Shiga does not teach that said amorphous polyester contains polyfunctional compounds having three or more carboxyl and/or hydroxyl groups.

31. Borman teaches a branched polyester which contains a branching component having at least three ester-forming groups, said branching component being included from 0.01 to 3 mole percent based on the terephthalate units (col. 2, lines 50-55). Examples of suitable branching components are tri- or tetracarboxylic acids, triols, and tetrols (col. 3, lines 32-36). Branching in the polyester results in increased molecular weight (col. 2, lines 39-42) and higher melt strength (col. 3, lines 40-43).

32. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Shiga to include Borman's branching component in the amorphous polyester resin for the benefit of increased molecular weight and higher melt strength.

Including 0.01 to 3 mole percent of said branching agent in said amorphous polyester reads on Claim 22.

Response to Arguments

33. The amendment to Claims 23 and 35 is sufficient to overcome the objections presented in the previous Office Action.

34. Applicant's arguments filed 18 May 2010 have been fully considered but they are not persuasive.

35. The Applicant argues that the Examiner's interpretation of the phrase "a portion" in the instant claims as meaning "any amount of glycidyl and/or isocyanate functional group greater than 0%" is in error, and asserts that one of ordinary skill in the art would understand that "a portion" means any amount greater than 0% but less than 100%.

36. The term "a portion" is not adequately defined in the specification to place any sort of upper or lower limit on the degree to which the functional groups of the reactive compound react with the amorphous polyester. A definition for term cannot be inferred or calculated from the Applicant's examples or any other portion of the disclosure. Thus, any reaction between the two may be construed as reacting "a portion" of said functional groups. There is no basis for excluding 100% or any other amount, so long as said amount exceeds 0%.

37. The Applicant notes that the reference to Shiga is not a 102(b) reference because Shiga was published on 15 January 2004, less than one year prior to the international filing date of the present application, 1 December 2004. The rejections of

Claims 17-21 and 23-29 under 35 USC 102(b) as being anticipated by Shiga have been withdrawn. However, the same claims were also rejected under 35 USC 103(a) as being obvious over Shiga. Therefore, the rejection under 35 USC 103(a) is maintained, and the previous rejection remains applicable.

38. The Applicant's arguments regarding Shiga acknowledge that Shiga indicates that hydroxyl and/or carboxyl groups of the polyester are reacted with the reactive compound. The Applicant argues that Shiga fails to teach or suggest a portion of the functional groups on said reactive compound are reacted with the polyester. This argument hinges upon the assertion that "a portion" excludes 100%, and assumes that Shiga reacts 100% of functional groups in the reactive compound.

39. First, as discussed above, the term "a portion" is not defined by the specification to the extent necessary to exclude 100%. As set forth in the previous Office Action and reiterated above, any amount greater than 0% meets the requirement of the claimed "portion". Second, the Applicant's assumption that Shiga reacts 100% of functional groups in the reactive compound is without basis. Shiga merely states that the polyester forms a partially crosslinked product when the reactive compound reacts with the –OH and –COOH groups of the polyester. The extent of the reaction cannot be determined by this statement. Regardless, because Shiga clearly teaches that some amount of functional groups greater than 0% reacts with the polyester component, the limitation "a portion" is met.

40. The Applicant argues that Shiga's Example 14 is different from present Example 1. The Applicant states that in Example 1, the amorphous polyester resin (A) and the

reactive compound (I) were first mixed, melted, kneaded, extruded, and pelletized to obtain a modifier for a polyester resin. The Applicant argues that this step was carried out in order to react “a portion” of the two or more glycidyl groups and/or isocyanate groups of the reactive compound with the amorphous polyester.

41. The Applicant further argues that in Shiga’s Example 14, the polyester and reactive compound were directly mixed together, and states that this process lacks the step of mixing, melting, and kneading the amorphous polyester and reactive compound.

42. Shiga's Example 14 teaches mixing, kneading, and extruding a combination of a similar polyester and reactive compound (see col. 18, lines 25-40). Although melting is not explicitly mentioned, it occurs necessarily prior to kneading. Shiga's Example 14 is carried out on the same apparatus and conditions used in Shiga's Examples 1-13. These Examples take place in an extruder set to L/D=30, screw diameter=20mm, full-flighted screw, compression ratio=2.0, and revolution rate=30 rpm (col. 15, lines 45-51). The extruder settings are identical to those employed in the present Example 1 (see p. 22, lines 18-25), with one exception: present Example 1 takes place at 220^{o}C, while Shiga's examples take place at a lower temperature of 180^{o}C. Thus, Shiga's Example 14 and present Example 1 are identical in every way, except that Shiga takes place at a lower temperature. One of ordinary skill in the art would expect that carrying out a reaction at a lower temperature would result in fewer functional groups reacting in Shiga's procedure. Thus, it is clear that if the instant examples illustrate reacting "a portion" of functional groups, then Shiga must also illustrate reacting “a portion” which is equal or lesser.

43. The Applicant argues that Shiga's process would cause gelation, whereas a process wherein a polyester and reactive compound are first reacted to obtain a modifier, and said modifier is then combined with a polyester, would provide unexpected superior results in terms of moldability, mechanical property, and transparency.

44. As set forth in paragraph 42 above, Shiga's process bears substantial similarity to the process described by the instant specification. Shiga's Examples 14-24 exhibit transparency values of 4 or 5 (col. 19, Table), indicating that they are highly transparent or extremely transparent (col. 17, lines 30-35). Additionally, mechanical properties such as melt strength, sagging, and solvent resistance do not appear to be negatively impacted by Shiga's process. Thus, the Applicant's argument for gelation and superior unexpected results is not valid.

45. Additionally, It is well settled that unexpected results must be established by factual evidence. Due to the absence of tests comparing appellant's composition with those of the closest prior art, it is concluded that the Applicant's assertions of unexpected results constitute mere argument. See, for example, In re De Blauwe, 736 F.2d 699, 705, 222 USPQ 191, 196 (Fed. Cir. 1984); In re Lindner, 457 F.2d 506, 508, 173 USPQ 356, 358 (CCPA 1972); Ex parte George, 21 USPQ2d 1058 (Bd. Pat. App. & Inter. 1991).

46. Furthermore, the arguments of counsel cannot take the place of evidence in the record. In re Schulze, 346 F.2d 600, 602, 145 USPQ 716, 718 (CCPA 1965). Examples of attorney statements which are not evidence and which must be supported by an

appropriate affidavit or declaration include, inter alia, statements regarding unexpected results. MPEP 716.01(c).

47. The Applicant argues that Akira (JP 2003-238777) does not teach using two or more types of polyester resins.

48. The reference to Akira is applied as a primary reference only in the rejection of Claim 38. This claim requires (I) an amorphous polyester resin and (II) a reactive compound. Thus, only one type of polyester is required by the claim.

49. The Applicant argues that Avramova (US 4,915,885) in view of Akira does not teach a composition as recited in Claim 7, or a process as recited in Claim 25. The Applicant summarizes the teachings of both references, but does not provide any specific arguments based on the combination set forth in the previous Office Action. The Applicant merely concludes that Avramova in view of Akira would arrive at a process as disclosed in Example 14 of Shiga.

50. The Applicant fails to address the combination of references or the motivation for combining the references set forth in the previous Office Action. Additionally, comparison to Shiga's Example 14 is not accurate, as Shiga's Example 14 contains a single polyester while Avramova in view of Akira contains two polyesters. Claim 7 requires only an amorphous polyester resin (I), a reactive compound (II), and an amorphous polyester resin (III). These components are clearly taught by the combination of references. Additionally, regardless of the interpretation of the phrase “a portion”, it is clear that some functional groups of Akira's reactive compound will react with one of Avramova's polyesters, such as PET, while some functional groups will react

with the second polyester, such as PBT. Thus, a portion of Akira's reactive compound will react with each polyester. With respect to the process of Claim 25, it is clear that Avramova in view of Akira will result in a similar process. Furthermore, although not necessary to or relied upon in the rejection of Claim 25 and its dependent claims, selection of any order of mixing ingredients is *prima facie* obvious, as is selection of any order of performing process steps in the absence of new or unexpected results. See, for example, In re Burhans, 154 F.2d 690, 69 USPQ 330 (CCPA 1946); In re Gibson, 39 F.2d 975, 5 USPQ 230 (CCPA 1930); MPEP 2144.04.

51. The Applicant argues that because Avramova and Akira do not teach the composition of Claim 7 or the process of Claim 25, the combination of Avramova in view of Akira and Borman is not valid.

52. Because Avramova in view of Akira is valid as set forth above, the Applicant's arugment is not convincing.

Conclusion

53. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

54. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

55. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ROBERT JONES JR. whose telephone number is (571)270-7733. The examiner can normally be reached on Monday - Thursday, 9 AM - 5 PM.

56. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on 571-272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

57. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

RSJ

/David Wu/
Supervisory Patent Examiner, Art Unit 1796